THROMBOPHILIA IN PREGNANCY -A CHALLENGE IN OBSTETRICS

UNIVERSITY OF MEDICINE, PHARMACY, SCIENCES AND TECHNOLOGY OF TÂRGU MUREŞ

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Abstract of the Ph.D.thesis

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Thrombophilia is a hemostasis disorder that increases the risk of venous thromboembolism in pregnancy and placental mediated complications.

In this study we will look at the manifestations of inherited thrombophilia during pregnancy in patients with a history of thrombotic events. We will also study the importance of inherited mutations , starting from the hypothesis that both (mother and fetus) are involved in the placental circulation.

In the follow-up of patients, we will use the Doppler examination that has proven useful in calculating resistivity indices on uterine, umbilical, cerebral arteries, as a predictive factor for sterility or placental vascular complications.

We try to optimize the results in sterility and pregnancy in the patients of our group by administering LMWH that has so far proved safe and effective for both the mother and the newborn. Of LMWH we used Fraxiparin (Nadroparina) that was less studied in this pathology. Among the side effects I have been monitoring the platelet count in the last trimester of pregnancy, a decrease of which is undesirable near the time of birth.

We still want to show the need to study patients with thrombophilia associated with pregnancy in the hope of developing a coherent management of this pathology, yet not a unanimously accepted position.

The special part is structured in four subchapters, each of which is associated with a database on which the research assumptions, which are the subject of this doctoral thesis, are built.

- The first subchapter discusses types of mutations in a group of 40 women suffering from idiopathic sterility, aged between 26 and 41 years, women who are not pregnant during the study, and their response to Nadroparin treatment (Fraxiparin).

-The second subchapter includes a batch of 62 first-year pregnant women who have been diagnosed with different types of mutations and their response to treatment.

-The third subchapter consists of a group of 81 women with various mutations and types of complications of thrombophilia.

-The last subchapter deals with the effect of Fraxiparin on placental circulation in treated thrombophilia. There are 34 types of associations of mutations and the effects of Doppler changes on thrombophilia tasks.

RESULTS

The effectiveness of Nadroparina therapy was found to decrease IR in uterine arteries in the midlute phase and to get pregnancies in patients with idiopathic sterility who had thrombophilic mutations ($p = 0.007$).

Comparing the antecedents of patients without treatment with their anticoagulant treatment, fewer thromboembolic or placental complications were found. I included these complications: thromboembolic manifestations, sterility, abortions, premature birth, DPPNI, premature and late neonatal deafness, PE, HTA, fetal death, HELLP, IUGR. For each category the data were extracted and were calculated by the square test, the statistical differences between the percentages and we obtained statistically significant differences for abortions p = 0.004, DPPNI p = 0.006 fetal intrauterine death p = 0.004, maternal thrombotic accidents p = 0.001.

I mentioned that the mean fetal weight was 3026.83 g, 26female newborns and 37 male sex were born, and the APGAR score was mostly 9.

No statistically significant effects of maternal mutations on fetal weights were observed, as well as fetal mutations did not influence fetal weight except for F II.

Regarding changes in Doppler markers under Nadroparina treatment, followed at 20 and 34 weeks of pregnancy, they show that even if there are differences, they are not significant. Fetal weight was found to be inversely correlated with IRaomb at 34 weeks and the lower the resistivity under treatment with Fraxiparin (Nadroparina), the higher the fetal weight.

Then, the impact of genetic mutations on the Doppler examination was studied and there were no significant influences on the patients undergoing treatment. This means that Nadroparina is involved in placental angiogenesis, protecting the fetus from the possible influences of maternal or fetal mutations.

The effect of risk factors has been studied: obesity, sedentary, smoking, and it has been observed that they do not accentuate the occurrence of placental or thromboembolic complications and are not involved in the occurrence of fetal mutations.

By comparing IR versus untreated patients, there were statistically significant differences in IRacm and IRaomb at 34 weeks, Fraxiparin being effective on Doppler markers.

Statistically significant difference between mother and fetus mutations, in most cases fetuses with significantly fewer mutations.

The study found 34 types of combinations of mutations. As a side effect of anticoagulant drugs they were little.

CONCLUSIONS

I turned to this pathology because it is an important factor causing maternal-fetal complications with significant economic and psychosocial impact.

According to the study, before any final recommendations on the issue of thrombophilia it would be appropriate to conduct more studies on a larger number of patients.

Thrombophilia is a disorder that is growing, it was interesting to study the degree of genetic mutations transmitted from mother to child, and the emergence of new mutations and combinations of mutations found.

It has been demonstrated the importance of Nadroparin in avoiding maternal thromboembolic complications and the lack of importance of risk factors in this pathology.

Another important conclusion is nadroparin’s safety for both , mother and fetus.